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ABSTRACT

Researchers in the area of human learning and memory have stressed the need for systematic studies of the factors involved in information processing and their effects on the retention and recall of the information processed. One such important factor may be self-reference. A lecturer may stimulate self-reference in students through self-disclosure. The effects of teacher self-disclosure on male (N=32) and female (N=32) college students' recall of lecture material and their perceptions of the teacher were examined. Subjects listened to one of two recordings of a lecture on learned helplessness by a male professor. Half of the subjects heard a tape containing teacher self-disclosure statements. The other half heard a tape containing impersonal hypothetical examples. Subjects then completed a free recall measure of the lecture and rated the teacher's expertness, attractiveness, and trustworthiness. Self-disclosure lowered the females' free recall and raised the free recall of the males, but did not affect teacher ratings. Teacher self-disclosure self-reference, and self-reference improved memory. Findings suggest that male students may have been better able than females to identify with the self-disclosures of the male teacher. (Author/NRB)

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Effects of Teacher Self-Disclosure on Student Learning and Perceptions of Teacher

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Effects of Teacher Self-Disclosure

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Researchers in the area of human learning and memory have stressed a need for systematic studies of the factors involved in information processing and their effects on the retention and recall of the information processed (3). Some authors have suggested that one important factor involved in information processing is self-reference. Rogers, Kuiper, and Kirker (11) and Bower and Gilligan (2) report superior retention in subjects who have been instructed to use the self as a reference point in processing information. Rogers, et al. (11) have proposed that the self is a very unique and useful cognitive structure for encoding a broad range of information. Bower and Gilligan (2) manipulated instructions to include reference to self, reference to one's mother and reference to Walter Cronkite. Self-reference produced the best recall, reference to one's mother was almost as good as self reference, and reference to Walter Cronkite produced the poorest recall. Based on these results, the authors suggest that we have cognitive schema for many individuals that are useful for encoding information. And the more information we have about the individual, the more useful will that cognitive structure be for encoding.

One way in which a lecturer might stimulate self-reference in students is through self-disclosure. Self-disclosure responses are statements referring to the past history or personal experiences of the speaker (4). By including self-disclosure in a lecture, a speaker

would seem to be modeling self-reference for the listener. This self-reference might enhance the listener's memory for the lecture material.

Self-disclosure has also been shown by researchers in counseling psychology to have positive effects on perceptions of the discloser and on verbal interactions (8; 9). Furthermore, self-disclosure has been examined in academic settings. For example, several authors have studied the effects of teacher and/or student self-disclosure in various classroom settings (6; 14). Woolfolk (13) studied the relationships between high level and low level self-disclosure by male and female teachers to male and female sixth grade students and perceptions of the teachers and student willingness to self-disclose. In general, she found that female students perceived all teachers more favorably than did male students. Male students preferred a low self-disclosing teacher to a high self-disclosing teacher while female students preferred a female teacher regardless of the level of self-disclosure. She also found that females tended to disclose more to a low self-disclosing teacher than to a high self-disclosing teacher while males did not differ in their self-disclosure to either teacher. The results of this study suggest that teacher self-disclosure in a classroom setting can have important effects on the teaching process. Moreover, the results indicate that teacher self-disclosure may differentially affect male and female students' perceptions and behavior.

Generalizability of Woolfolk's findings is limited, however, in that the effects of self-disclosure were investigated using only sixth grade students. It is possible that teacher self-disclosure

may have different effects on other populations such as college students. Furthermore, she examined only perceptions of the teacher and student willingness to reciprocate self-disclosure, both aspects of the teaching process. She did not examine any potential relationships between teacher self-disclosure and the outcome of teaching. The ultimate question regarding any teaching technique such as self-disclosure is what effect the approach has on student retention of academic material.

Therefore, the purposes of the present study were to examine the effects of teacher self-disclosure on male and female college students' recall of lecture material and their perceptions of the teacher. It was hypothesized that teacher self-disclosure would elicit significantly better performance on a free recall measure of lecture material. Based on Woolfolk's (13) study, it was further hypothesized that, in the case of perceptions, female subjects would perceive both teachers more favorably than male subjects while males would perceive the self-disclosing teacher more favorably than the non-self-disclosing teacher. The extent to which sex of subject interacted with self-disclosure in the case of recall of lecture material was also examined, but no specific hypotheses about this relationship were generated.

The design of the study involved the presentation of lecture stimulus materials containing either teacher self-disclosure or no self-disclosure. Subjects completed a free recall test covering the lecture material and rated the teacher on the dimensions of expertness, social attractiveness, and trustworthiness.

METHOD

Subjects

Subjects were 32 female and 32 male undergraduates enrolled in beginning psychology courses at Southern Illinois University. They received credit toward their course grade for participating in the study. Subjects were randomly assigned to either the experimental or control groups, with 16 females and 16 males in each condition.

Construction of Audiotaped Stimulus Materials

Two 15 minute recordings were made of a simulated lecture on learned helplessness read from prepared scripts by a male college professor.[1] On one tape, the professor made three self-disclosing statements to illustrate concepts in the lecture. The self-disclosing statements included two examples of how he had developed learned helplessness and one example of how he had overcome conditions leading to learned helplessness. On the other tape, the professor gave the same three examples but phrased them totally in hypothetical, non-personal terms. In order to standardize the presentation of the lecture material, both tapes were prepared from a master tape containing most of the lecture; either the self-disclosure or hypothetical examples were dubbed in by an electronics technician. The self-disclosing statements and the hypothetical examples were inserted at approximately 5 minute intervals on the tapes.

Dependent Measures

Retention of lecture material. Subjects' retention of lecture material was assessed by a free-recall procedure in which they were

asked to write down everything that they could remember from the lecture. Their free recall protocols were then scored by a trained rater who counted the number of idea units each subject remembered from the lecture. The reliability of the ratings was determined by having another rater independently score one-third of the protocols. The interrater reliability was .94.

Perceptions of the teacher. Subjects' perceptions of the expertness, social attractiveness, and trustworthiness of the self-disclosing or non-self-disclosing teacher were assessed by using the Counselor Rating Form (1). For the purposes of this study, the measure was called the Teacher Rating Form (TRF). The TRF consists of 36 4-point bipolar items, 12 on each of the three dimensions. Scores on the dimension may range from 12 to 48. Studies using the Counselor Rating Form have demonstrated valid and reliable differences both within and between counselors on perceived expertness, social attractiveness, and trustworthiness dimensions as a function of appropriate experimental manipulations (1; 7).

Procedure

The experiment was conducted in a large classroom. Subjects, tested in two randomly assigned groups of 32, were told that they would hear a tape of a lecture by a male college professor. For each subject group, either the tape using self-disclosure or no self-disclosure was played through the room's speaker system. In order to simulate an actual classroom setting, subjects were allowed to take notes during the lecture. After the completion of the lecture, subjects were given the TRF and asked to rate the teacher. The sub-

jects were then instructed to write down everything they could remember from the lecture, including trivial material.

RESULTS

Retention of Lecture Material

An analysis of variance conducted on the free recall of lecture material indicated that, although there was no main effect due to self-disclosure, there was a significant interaction between self-disclosure and sex of subject, $F(1, 60) = 5.70$, $p < .02$. There was also a significant main effect due to sex of subject, $F(1, 60) = 7.61$, $p < .008$. The means and standard deviations for the four groups are contained in Table 1. As the main effect indicated, females gene-

Insert Table 1 here

rally scored higher than males ($M = 9.5$ vs. 6.7), but analyses of simple effects revealed that this difference was significant only in the no self-disclosure condition $F(1, 63) = 13.24$, $p < .0001$. Although males recalled more with self-disclosure ($M = 7.6$) than with no self-disclosure ($M = 5.9$), self-disclosure lowered the performance of females ($M = 11.1$ vs. 7.9).

An additional analysis examining the free recall of the specific content of the self-disclosure statements in the self-disclosure condition versus the hypothetical examples in the no self-disclosure condition yielded no significant effects.

Perceptions of the Teacher

Analyses of variance conducted on perceived teacher dimensions of expertness, social attractiveness, and trustworthiness yielded

Table 1

Mean scores and standard deviations on free recall test for male and female subjects exposed to a lecture containing teacher self-disclosure versus no self-disclosure

	Experimental Condition			
	No Self-Disclosure		Self-Disclosure	
Sex of Subject	M	SD	M	SD
Male	5.9	3.0	7.6	3.8
Female	11.1	4.9	7.9	4.3

significant main effects due to sex of subject such that across both the self-disclosure and no self-disclosure conditions, female subjects rated the teachers as significantly more attractive, $F(1, 60) = 6.09$, $p < .01$, and significantly more trustworthy, $F(1, 60) = 3.68$, $p < .05$, than did male subjects. They also demonstrated a nonsignificant tendency to rate the teachers as more expert, $F(1, 60) = 3.52$, $p < .06$. Although both males and females rated the teachers positively on the dimensions, females rated the self-disclosing and non-self-disclosing teacher as very attractive (mean = 37), very trustworthy (mean = 40), and very expert (mean = 41). Males rated the teachers as less attractive (mean = 33), less trustworthy (mean = 37) and less expert (mean = 37). There wereno significant main effects for self-disclosure condition and no significant interactions on the TRF.

DISCUSSION

Generally the results of this study suggest that teacher self-disclosure can affect student recall of lecture material, but the specific nature of the effect is surprising. Although self-disclosure raised the recall of males, it lowered the recall of females. One explanation for these findings is that male students are more able to identify with, and accept, the self-disclosures of a male teacher who is providing personal examples from his own experiences. The male students' identification with the self-disclosures may have facilitated their own self-reference and general recall of lecture material which contained the examples. This explanation is supported by research suggesting that self-disclosure between same-sex individuals is maximally effective because the recipients can more readily identify with the self-discloser (5). It is further supported by Mood (10)

who found that students had greater comprehension of material when it related to their own world of experiences. On the other hand, the female students may have been less able to identify with a male teacher's self-disclosures. Rather than clarifying the course material and providing relevant examples for the females, the self-disclosures may have interfered with their learning and eventual recall of the lecture content.

Schmeck (12) has emphasized the importance of "elaborative processing" in establishing a durable memory trace. This includes thinking about examples as cues for encoding and retrieving information. Examples may serve as subsequent retrieval cues for the recall of specific information. Perhaps the male teachers' self-disclosure examples were not as appropriate for female students and furthermore they may have interfered with those female students' ability to generate <u>their own</u> personal examples or cues.

The results of this study have important implications for continued research on teacher self-disclosure, but only a male teacher making fairly personal self-disclosures was used in this study. Additional research is needed to determine the effects of male and female teachers using self-disclosure of differing levels of personalness on male and female students in order to establish the generalizability of the findings. Furthermore, the parameters of teacher self-disclosure need to be carefully defined and studied. Research on self-disclosure in other settings (8) suggests that these parameters may include: the amount of self-disclosure (number and length); intimacy of the self-disclosure; gender-pairings of the discloser and recipients of self-disclosure; timing of the self-disclosure (during a class session and/or during different class sessions of a course); type of classroom setting, i.e., large lectures versus small-group discussions.

NOTES

1. Scripts are available upon request from the first author.

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